AMENDMENTS TO THE CLAIMS

The present listing of claims will replace all prior versions and listings of claims in the application.

Claims 1-48 (canceled).

49. (Previously presented) A method for treating ischemic myocardial tissue of a mammal in need of such treatment comprising:

a) identifying a mammal which has, is suspected of having, or will have the ischemic tissue;

b) injecting an effective amount of a solution comprising a nucleic acid encoding at least one angiogenic protein or an effective fragment thereof into the myocardial tissue; and

c) administering to the mammal an effective amount of at least one of: stem cell factor (SCF), colony stimulating factor (CSF) or an effective fragment thereof, thereby treating the ischemic myocardial tissue of the mammal.

50. (Previously presented) The method of claim 49, wherein the angiogenic protein is a vascular endothelial growth factor (VEGF) or an effective fragment thereof.

51. (Previously presented) The method of claim 50, wherein the VEGF is VEGF-1 or VEGF165.

52. (Previously presented) The method of claim 49, further comprising expressing the angiogenic protein or fragment in the myocardium.

53. (Previously presented) The method of claim 52, wherein the method further comprises increasing frequency of endothelial progenitor cells (EPC) in the mammal.

54. (Previously presented) The method of claim 52, wherein the increase in frequency of the EPC is at least about 20% as determined by a standard EPC isolation assay.

55. (Previously presented) The method of claim 52, wherein the method further comprises increasing EPC differentiation in the mammal.

56. (Previously presented) The method of claim 55, wherein the increase in EPC differentiation is at least about 20% as determined by a standard EPC culture assay or a standard hindlimb ischemia assay.

57. (Previously presented) The method of claim 50, wherein the level of VEGF or VEGF fragment expression is sufficient to increase neovascularization by at least about 5% as determined by a standard cornea micropocket assay.

58. (Previously presented) The method of claim 49, wherein the amount of administered SCF, CSF or fragment is sufficient to increase EPC bone marrow derived EPC incorporation into foci.

59. (Previously presented) The method of claim 58, wherein the increase in EPC bone marrow derived EPC incorporation into foci is at least about 20% as determined by a standard rodent bone marrow (BM) transplantation model.

60. (Previously presented) The method of claim 49, wherein the method further comprises administering at least one angiogenic protein or effective fragment thereof before or after administration of the nucleic acid to the mammal.

61. (Previously presented) The method of claim 49, wherein the method further comprises administering to the mammal one or more of urokinase, plasminogen activator, and heparin.

62. (Canceled)

63. (Previously presented) The method of claim 49, wherein the nucleic acid is directly injected with a catheter or stent.

64. (Previously presented) The method of claim 49, wherein the nucleic acid is inserted into a cassette operably linked to a promoter.

65. (Previously presented) The method of claim 49, wherein the myocardial tissue is ischemic or is associated with infarction or dysfunction.

66. (Previously presented) The method of claim 49, wherein the angiogenic protein or factor is one of acidic fibroblast growth factor (aFGF), basic fibroblast growth factor (bFGF),

epidermal growth factor (EGF), transforming growth factor α and β (TGF-α and TFG-β), platelet-derived endothelial growth factor (PD-ECGF), platelet-derived growth factor (PDGF), tumor necrosis factor α (TNF-α), hepatocyte growth factor (HGF), insulin like growth factor (IGF), erythropoietin, colony stimulating factor (CSF), macrophage-CSF (M-CSF), granulocyte/macrophage CSF (GM-CSF), stem cell factor (SCF), angiopoetin-1 (Ang1), nitric oxide synthase (NOS); or a mutein or fragment thereof.

67. (New) The method of claim 49, wherein the CSF is granulocyte macrophage colony stimulating factor (GM-CSF).

68. (New) A method for treating ischemic myocardial tissue of a mammal in need of such treatment comprising:

a) administering to the mammal an effective amount of granulocyte macrophage colony stimulating factor (GM-CSF) or an effective fragment thereof; and

b) administering an effective amount of a nucleic acid encoding at least one angiogenic protein or an effective fragment thereof into the myocardial tissue; thereby treating the ischemic myocardial tissue of the mammal.

69. (New) A method for treating ischemic myocardial tissue of a mammal in need of such treatment comprising:

a) administering to a mammal an effective amount of a cytokine that mobilizes endothelial progenitor cells; and

b) subsequently administering an effective amount of a nucleic acid encoding at least one angiogenic protein or an effective fragment thereof into the myocardial tissue, wherein the method increases the neovascularization of said tissue thereby treating the ischemic myocardial tissue of the mammal.

70. (New) The method of claim 68, wherein the cytokine is GM-CSF.

71. (New) The method of claim 68, wherein the cytokine is SCF.

72. (New) The method of claim 67 or 68, wherein the angiogenic protein or factor is one of acidic fibroblast growth factor (aFGF), basic fibroblast growth

factor (bFGF), epidermal growth factor (EGF), transforming growth factor α and β (TGF-α and TFG-β), platelet-derived endothelial growth factor (PD-ECGF), platelet-derived growth factor (PDGF), tumor necrosis factor α (TNF-α), hepatocyte growth factor (HGF), insulin like growth factor (IGF), erythropoictin, colony stimulating factor (CSF), macrophage-CSF (M-CSF), granulocyte/macrophage CSF (GM-CSF), stem cell factor (SCF), angiopoetin-1 (Ang1), nitric oxide synthase (NOS); or a mutein or fragment thereof.